

REMARKS/ARGUMENTS

1. Claim Amendments

Claims 1, 21, 27 and 33 have been amended. Claims 3 and 4 have been canceled. Claims 1-2, 5-7, 9-22, 24-28, 30-34 and 36-38 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of any foregoing amendments and the following remarks.

2. Claim Rejections – 35 U.S.C. § 103 (a)

Claims 1-7, 9-17, 19-22, 24-34, and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Purcell et al* (5,598,514) in view of *Miller et al* (6,847,365). Claims 1, 21, 27 and 33 have been amended and claims 3 and 4 have been canceled to distinguish the cited references from the present invention, as claimed and as seen in Figure 9 of the present application. In the present invention, the luminance and chrominance values for the same image rows are located next to each other in memory. This makes transfer of a block of image rows simple because only one transfer will be needed. The standard way of storing YCbCr data as seen in Figure 8 requires three transfers for the transfer of a block of rows. Calculating the address of where in memory where a specific luminance or chrominance value is stored is also less complex if the row interleaved scheme is used.

The claims have been amended to claim that data is stored in a row interleaved format as shown in Figure 9. Support for this amendment can be found in the Specification at paragraph [0034]:

As shown in Figure 8, the YCbCr 4:2:0 format may be stored as one continuous memory block for all luminance pixels and two separate memory blocks for the two chrominance components, Cb and Cr. However, an interleaved YCbCr 4:2:0 format, in which the chrominance and luminance data is stored in one continuous memory block, may alternatively be used. An example of an interleaved YCbCr 4:2:0 format is shown in Figure 9.


The standard way of storing image data in YCbCr 4:2:2 format is to use an interleaved scheme. It is not, however, trivial for a person of ordinary skill in the art to use or come up with the idea of storing YCbCr 4:2:0 data in an interleaved format. The standard way of storing YCbCr 4:2:0 is to store the data for luminance and the two chrominance in three separate blocks as shown in Figure 8 of the present application. The reason this is difficult to do for YUV 4:2:0, is that the chrominance data is sub-sampled in both horizontal and vertical direction. YUV 4:2:2 data is only sub-sampled in horizontal direction. Methods of interleaving luminance and chrominance values when the chrominance values are sub-sampled in a vertical direction and shared between pixels in different rows, become extremely impractical as it is difficult to calculate the address in memory where a specific luminance or chrominance value is stored.

CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,



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Date: February 4, 2008

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